

Back-Light Module for Image Scanning Device and Method for Calibrating Illumination with the Back-Light Module

ABSTRACT OF THE DISCLOSURE

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A back-light module for an image scanning device includes a casing, a pair of tubular lamps, a light guide plate, and a frosted transparent plate. The image scanning device includes a document supporting plate and an optical scanning module movable in a longitudinal direction. A calibration of illumination with the back-light module is done by (1) activating the back-light module to project light onto the optical scanning module, (2) driving the optical scanning module in the longitudinal direction, (3) obtaining illumination signals associated with selected pixels of a longitudinally-extending calibration zone formed on the document supporting plate, (4) comparing each illumination signal with a reference to obtain a result and manipulating the result to obtain a calibration parameter, and (5) calibrating the illumination of pixels of an image with the corresponding calibration parameters in scanning a transmissive original document.